LED Driver C.C. 250W with High Input Voltage Series

Main Features:

- Input Voltage: 180~528Vac or 250~740Vdc
- Output Wattage: Constant Wattage (C.P.) at 250**W**
  with Adjustable Current Setting
- Programmable Method: Wire or Wireless
- High Efficiency: Up to **90%**
- Dimming Function: **0-10V**
- Auxiliaire Voltage : **12**Vaux with **300**mA
- Lightning Protection: Built-in Surge Protector at 10KV/5KA
- Reliability Protection: OVP, SCP, OTP
- Safety Regulation: Complies with UL8750 & EN61347
- **Type TL and HL** Program Certified from UL
- **Class P** UL standard for retrofit kit
- Waterproof Rating: IP67
- Five Year Warranty under Normal Usage Conditions

SPECIFICATION

Model No. (i)	Output Voltage Range (Vdc)	Programmable Output Constant Current Range (mA) (i)	OVP (Vdc max.)	OTP (°C) (ii)	Case Temperature (Tc)
LDD-250D238P1050HH-V	143-357	700-1050	120% Vomax, typ.	Tc≧105±10℃	90C
LDD-250D179P1400HH-V	107-238	1050-1400	120% Vomax, typ.	Tc≧105±10℃	90C
LDD-250D167P1500HH-V(iii)	96-229	1050-1500	120% Vomax, typ.	Tc≧105±10℃	90C
LDD-250D119P2100HH-V	71-179	1400-2100	120% Vomax, typ.	Tc≧105±10℃	90C
LDD-250D060P4200HH-V	36-89	2800-4200	120% Vomax, typ.	Tc≧105±10℃	90C
LDD-250D036P6900HH-V	22-52	4800-6900	120% Vomax, typ.	Tc≧105±10℃	90C
Note	(i) Pre-set Constant Current Value with dimming				
	(ii) Lower the output current when Tc≧105±10℃; Auto Recovery When Tc≦70±10℃				
	(iii) it is 240W model				

Input Spec.	Condition Description	Min.	Normal	Max.	Units
Input Voltage Range	Dedicated High Voltage Input	180	208-480	528	VAC
Input Frequency Range		47	50/60	63	Hz
Input Current	**277 VAC/480 VAC input, full load output**			**1.0/0.6**	A
Power Factor	@60% - 100% load		＞0.9		
THD (total harmonic distortion)	@60% - 100% load		<15		%
Inrush Current	At 277 VAC input, 25°C cold start / At 480 VAC input, 25°C cold start			65 / 70	A
Leakage Current	max @277Vac 60Hz			1.0	mA

Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5				

Output Spec.	Condition Description	Min.	Normal	Max.	Units
Current Accuracy			±5		%
Ripple Current	At 100%-60% Load. The result differs according to different LED load characteristic.			5	% Ip-p (Io)
Overshoot/Undershoot	% of Iout max & LED load			10	%
Turn-On Delay	Startup time at cold start			1.2	s
Auxiliary Power (Vaux)	With 300mA max	-5%	12	+5%	Vdc

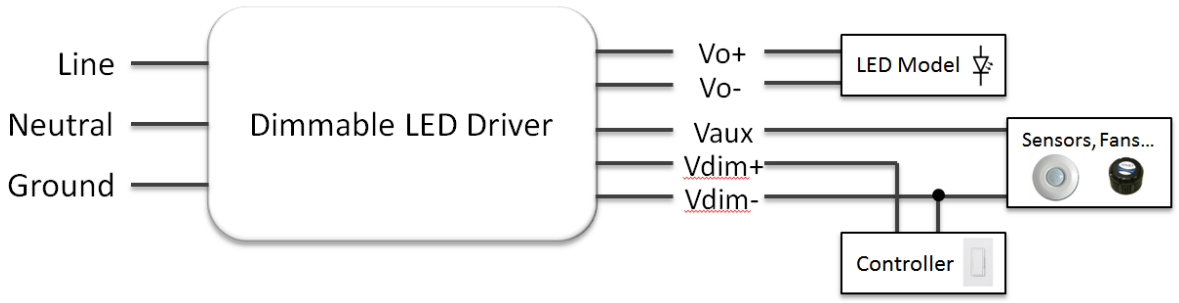
General Spec.	Condition Description	Min.	Normal	Max.	Units
Efficiency	Measured at full load in the thermal balanced condition		92	93	%
MTBF	measured at Tc= 75℃ (MIL-HDBK-217F)		≥280,000		Hours
Lifetime	measured at Tc= 75℃		≥100,000		Hours
Operating/Storage Temperature	10%RH～100%RH (See De-rating Curve for more details	-40/-40		70/85	℃
Dimension (OL/L x W x H)	OL is the overall length with mounting plates	251/225*68*38.5			mm
		9.88/8.86*2.68x1.52			inch
Weight	Net weight without package	3.52/1.6			lb/kg

Safety & EMC Compliance	Category	Condition Description
Safety Regulations	UL8750	Light Emitting Diode(LED) Equipment for Use in Lighting Products
	UL1012	Power Unit Other Than Class 2
	IEC 61347-1	Lamp Controlgear Part 1: General and Safety Requirements
	IEC 61347-2-13	Lamp Controlgear Part 2-13: Particular Requirement for d.c. or a.c. Supplied Electronic Controlgear foe LED Modules
	CE	Europe: EN 61347-1, EN61347-2-13
EMI Standards	IEC 55015	Conducted emission test & Radiated emission test
	IEC 61000-3-2	Harmonic current emissions; Class C (≥75% load)
	IEC 61000-3-3	Voltage fluctuations & flicker
	FCC Part 15	Class B
EMS Standards	IEC 61000-4-2	Electrostatic discharge (ESD)
	IEC 61000-4-3	Radio frequency electromagnetic field susceptibility test (RS)
	IEC 61000-4-4	Electrical fast transient (EFT)
	IEC 61000-4-5	Surge immunity test L-N:2kV; LN-PE:4kV (Extemal Surge Protection Device 4K/6K or 6K/10K)
	IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
	IEC 61000-4-8	Power frequency magnetic field test
	IEC 61000-4-11	Voltage dips
	IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

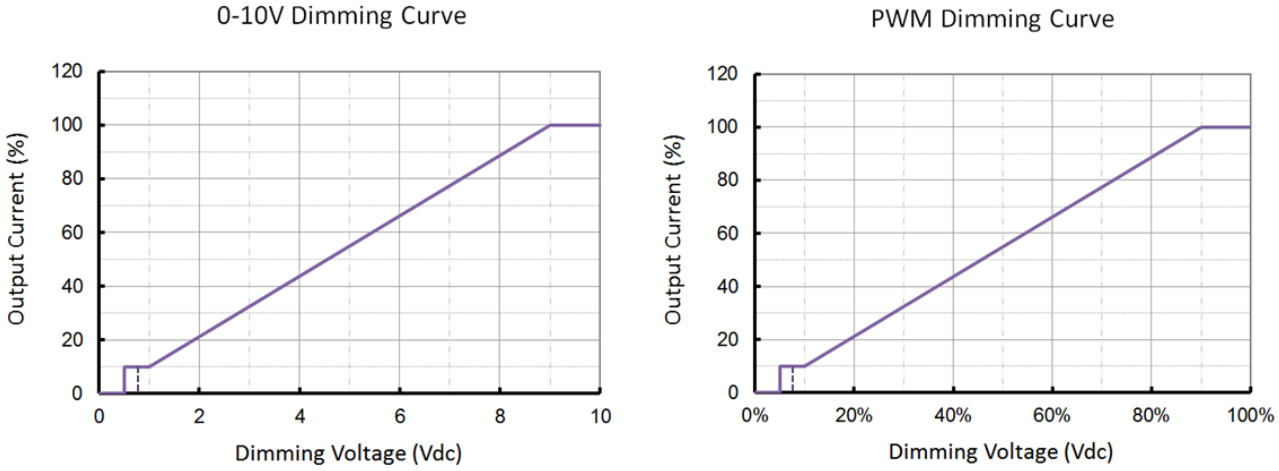
■ Dimming Curve

Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold		0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	0.7V or 7%	
PWM High	3V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		

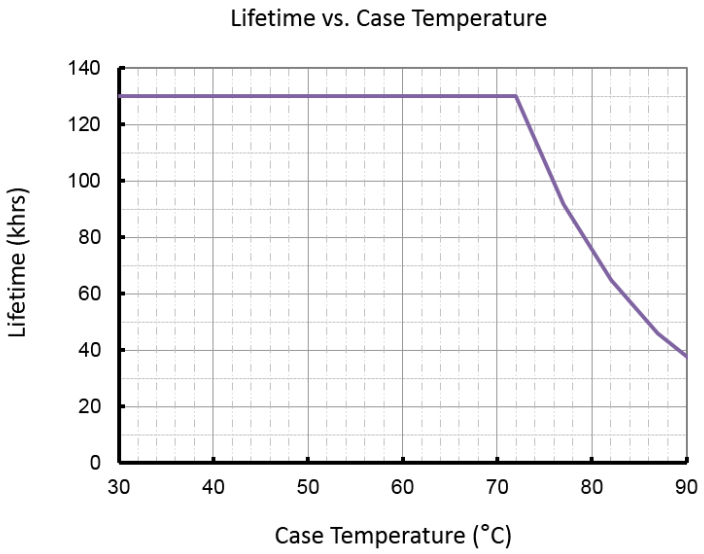
Dimming Wire



With dim-off (dto)

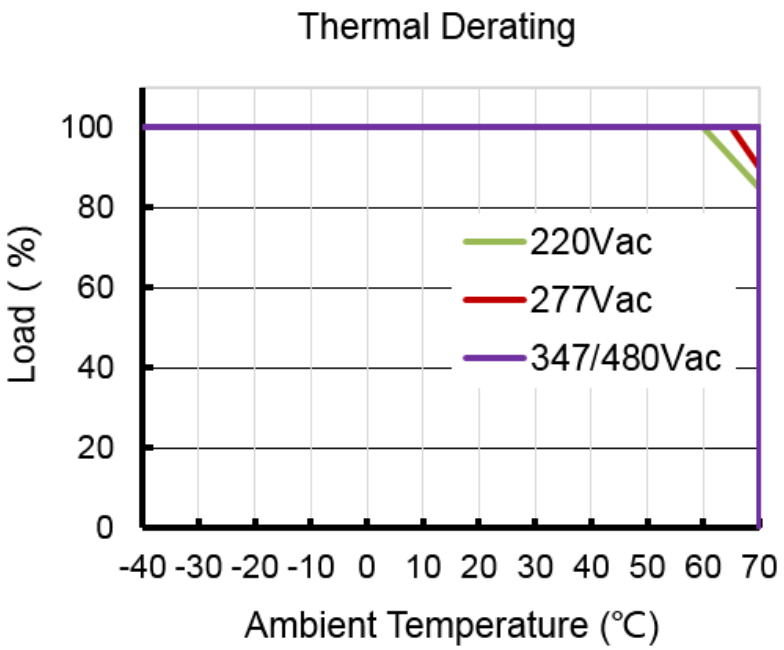


■ Lifetime vs. Case Temperature

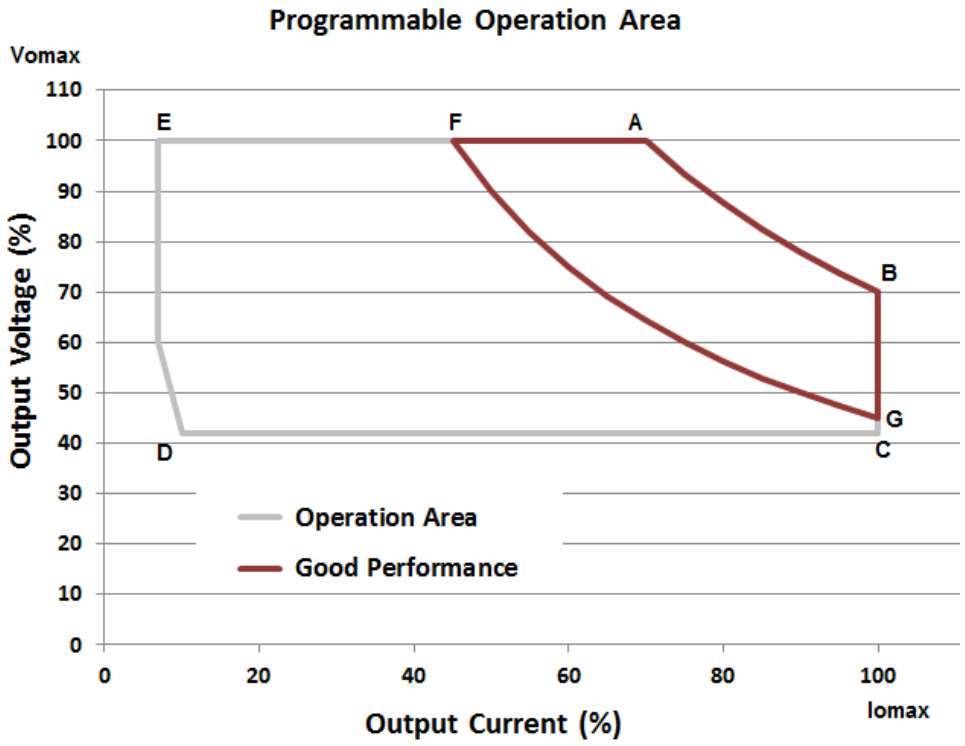


(End of Life: Maximum Failure Rate=10%)

■ De-rating Curve



■ Current vs. Voltage Curve



Io (mA) | Vo (V)	**B** Imax	**A** Vmax	**F** (60% of I at A) | (as Vmax)	**G** (as Imax) | (60% of V at B)	**C** (as Imax) | Vmin = (60% of V at B)	**D** (10% of Imax) | (60% of V at B)	**E** (10% of I at A) | (as Vmax)
LDD-250D238P1050HH-V	***1050 | 238***	***700 | 357***	***420 | 238***	***1050 | 143***	***1050 | 143***	***105 | 143***	***70 | 357***
LDD-250D179P1400HH-V	***1400 | 179***	***1050 | 238***	***630 | 179***	***1400 | 107***	***1400 | 107***	***140 | 107***	***105 | 238***
LDD-250D119P2100HH-V	***2100 | 119***	***1400 | 179***	***840 | 119***	***2100 | 71***	***2100 | 71***	***210 | 71***	***140 | 179***
LDD-250D060P4200HH-V	***4200 | 60***	***2800 | 89***	***1680 | 60***	***4200 | 36***	***4200 | 36***	***420 | 36***	***280 | 89***
LDD-250D036P6900HH-V	***6900 | 36***	***4800 | 52***	***2880 | 36***	***6900 | 22***	***6900 | 22***	***690 | 22***	***480 | 52***
On **BA** Curve Line	Constant Power Area						
Within **BAFG** Box	Good Performance Area						
Within **ABCDE** Box	Operational Area						

■ Mechanical Outline (Unit: mm)

Note: Dimensions in millimeters, where 25.4 mm = 1 inch

Tolerance: ±0.51 mm

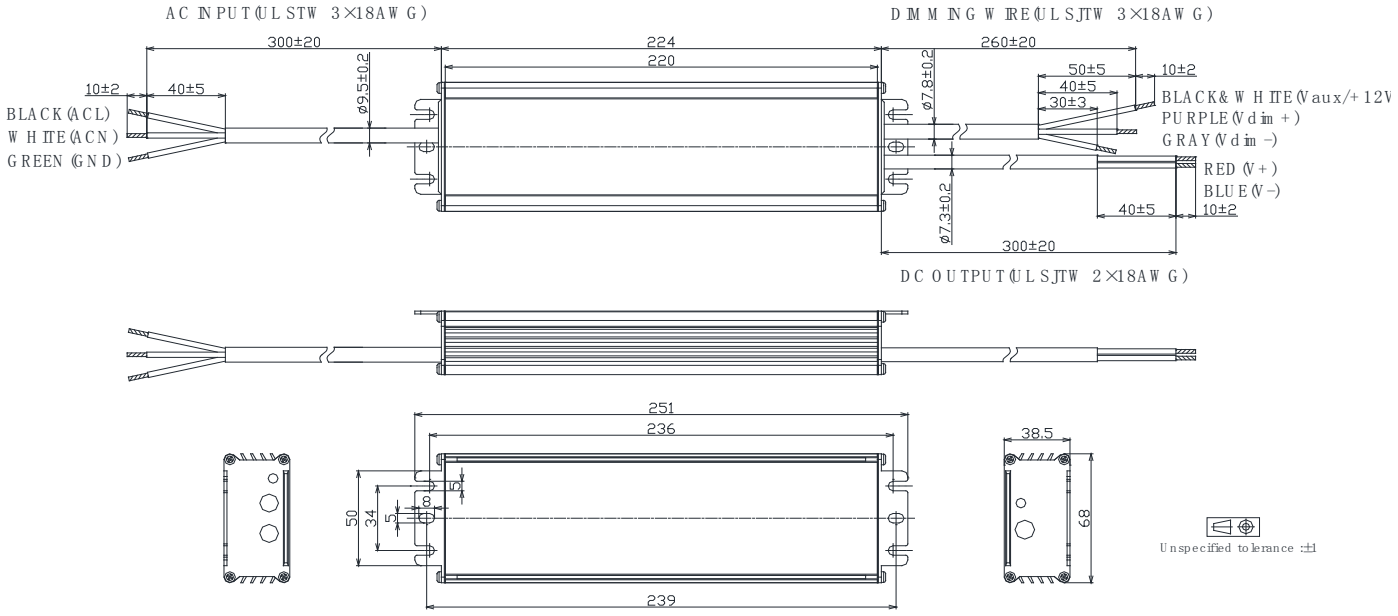


Figure 34, AR9PT

Safety Note: Please make sure the output cable does not connect to dimming cable or the cables of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor.

Revision

Date	Rev.	Description of Change		
		Item	Old	New
3/6/2017	V2a	In Draft Release	/	/
5/23/2017	V2b	Add new model		**LDD-250D167P1500HH-V** (iii) it is 240W model
11/20/2017	V2c	Change dimension	263/236*90*41.5 - 10.35/9.29*3.54*1.63	251/225*68*38.5 – 9.88/8.86*2.68x1.52
1/8/2018	V2d	Update Fig. No.	*Fig. 33 AR7PT*	*Fig. 34 AR9PT*
5/24/2019	V2e	Update Fig. No.	*Fig. 34 AR9PT*	*Fig. 34 ARXPT*
		Add new model		**LDD-250D060P4200HH-V**
		Add new model		**LDD-250D036P6900HH-V**
		Remove a model	**LDD-250D167P1500HH-V(iii)**	*discontinued*